

## CLAIMS

1. An illumination device comprising:  
a light emitting diode that emits a radiation pattern, wherein a maximum luminous  
5 intensity of the radiation pattern is displaced relative to a center axis of the light emitting  
diode; and  
a number of light guides positioned to be illuminated by the light emitting diode,  
each light guide positioned at offset locations relative to the center axis of the light  
emitting diode.  
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2. The illumination device of claim 1, wherein each light guide is positioned such  
that a cross-sectional center of each light guide substantially corresponds to locations of  
the maximum luminous intensity of the radiation pattern of the light emitting diode.
- 15 3. The illumination device of claim 2, wherein the locations of the maximum  
luminous intensity of the radiation pattern of the light emitting diode are substantially  
rotationally symmetric around the center axis of the light emitting diode.
4. The illumination device of claim 1, wherein the number of light guides includes  
20 two light guides.
5. The illumination device of claim 1, further comprising a light guide fixture  
formed to mate with the light guides, wherein the light guide fixture positions the light  
guides at the offset locations relative to the center axis of the light emitting diode.  
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6. The illumination device of claim 5, wherein the light guide fixture is positioned  
adjacent the light emitting diode.
7. The illumination device of claim 5, wherein the light guide fixture is a housing  
30 that houses the light emitting diode.

8. The illumination device of claim 1, wherein at least one of the light guides provides directional side lighting in a first direction and wherein at least another of the light guides provides directional side lighting in a second direction.

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9. An illumination device comprising:

a light emitting diode that emits a radiation pattern, wherein a maximum luminous intensity of the radiation pattern is displaced relative to a center axis of the light emitting diode; and

10 at least one light guide positioned to be illuminated by the light emitting diode, the light guide positioned at an offset location relative to the center axis of the light emitting diode.

10. The illumination device of claim 9, wherein the light guide is positioned such that  
15 a cross-sectional center of the light guide substantially corresponds to a location of the maximum luminous intensity of the radiation pattern of the light emitting diode.

11. The illumination device of claim 9, further comprising a light guide fixture formed to mate with the light guide, wherein the light guide fixture positions the light  
20 guide at the offset location relative to the center axis of the light emitting diode.

12. The illumination device of claim 11, wherein the light guide fixture is positioned adjacent the light emitting diode.

25 13. The illumination device of claim 11, wherein the light guide fixture is a housing that houses the light emitting diode.

14. An illumination device comprising:

a light emitting diode that emits a radiation pattern wherein a maximum luminous intensity of the radiation pattern is displaced relative to a center axis of the light emitting diode;

5 a light guide fixture, the light guide fixture formed to mate with light guides,

a first light guide having a first end mated with the light guide fixture, wherein the first end of the first light guide is positioned at a first offset location relative to the center axis of the light emitting diode,

10 a second light guide having a first end mated with the light guide fixture, wherein the first end of the second light guide is positioned at a second offset location relative to the center axis of the light emitting diode.

15. The illumination device of claim 14, wherein the first end of the first light guide is positioned such that a cross-sectional center of the first light guide substantially

15 corresponds to a first location of the maximum luminous intensity of the radiation pattern of the light emitting diode, and

wherein the first end of the second light guide is positioned such that a cross-sectional center of the second light guide substantially corresponds to a second location of the maximum luminous intensity of the radiation pattern of the light emitting diode.

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16. The illumination device of claim 15, wherein the first and second locations of the maximum luminous intensity of the radiation pattern of the light emitting diode are substantially rotationally symmetric around the center axis of the light emitting diode.

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17. The illumination device of claim 15, wherein the light guide fixture is positioned adjacent the light emitting diode.

18. The illumination device of claim 15, wherein the light guide fixture is a housing that houses the light emitting diode.

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19. The illumination device of claim 15, wherein the light emitting diode is a first light emitting diode and the light guide fixture a first light guide fixture, the illumination device further comprising:

5 a second light emitting diode that emits a radiation pattern wherein a maximum luminous intensity of the radiation pattern of the second light emitting diode is displaced relative to a center axis of the second light emitting diode;

a second light guide fixture, the second light guide fixture formed to mate with light guides,

10 wherein the first light guide has a second end mated with the second light guide fixture, wherein the second end of the first light guide is positioned at a first offset location relative to the center axis of the second light emitting diode, and

wherein the second light guide has a second end mated with the second light guide fixture, wherein the second end of the second light guide is positioned at a second  
15 offset location relative to the center axis of the second light emitting diode.

20. The illumination device of claim 19, wherein the first end of the first light guide is positioned such that a cross-sectional center of the first light guide substantially corresponds to a first location of the maximum luminous intensity of the radiation pattern  
20 of the first light emitting diode,

wherein the first end of the second light guide is positioned such that a cross-sectional center of the second light guide substantially corresponds to a second location of the maximum luminous intensity of the radiation pattern of the first light emitting diode,

25 wherein the second end of the first light guide is positioned such that a cross-sectional center of the first light guide substantially corresponds to a first location of the maximum luminous intensity of the radiation pattern of the second light emitting diode, and

wherein the second end of the second light guide is positioned such that a  
30 cross-sectional center of the second light guide substantially corresponds to a second

location of the maximum luminous intensity of the radiation pattern of the second light emitting diode.

21. The illumination device of claim 19, wherein the first light guide fixture is  
5 positioned adjacent the first light emitting diode, and wherein the second light guide  
fixture is positioned adjacent the second light emitting diode.

22. The illumination device of claim 19, wherein the first light guide fixture is a  
housing that houses the first light emitting diode, and wherein the second light guide  
10 fixture is a housing that houses the second light emitting diode.

23. The illumination device of claim 15, wherein the first light guide provides  
directional side lighting in a first direction, and wherein the second light guide provides  
directional side lighting in a second direction.

15 24. An illumination device comprising:  
a light emitting diode that emits a radiation pattern, wherein a maximum luminous  
intensity of the radiation pattern is displaced relative to a center axis of the light emitting  
diode;  
20 a number of light guides; and  
means for positioning each light guide at offset locations relative to the center  
axis of the light emitting diode.

25 25. The illumination device of claim 24, further comprising means for positioning  
each light guide such that a cross-sectional center of each light guide substantially  
corresponds to locations of the maximum luminous intensity of the radiation pattern of  
the light emitting diode.

26. A sign comprising:

a frame;

a light emitting diode that emits a radiation pattern wherein a maximum luminous intensity of the radiation pattern is displaced relative to a center axis of the light emitting diode, wherein the light emitting diode is housed within the frame; and

a number of light guides positioned to be illuminated by the light emitting diode, each light guide positioned at offset locations relative to the center axis of the light emitting diode, wherein the frame is formed with holes and the each light guide protrudes through at least one of the holes.

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27. The sign of claim 26, wherein each light guide is positioned such that a cross-sectional center of each light guide substantially corresponds to locations of the maximum luminous intensity of the radiation pattern of the light emitting diode.

15 28. The sign of claim 26, wherein the locations of the maximum luminous intensity of the radiation pattern of the light emitting diode are substantially rotationally symmetric around the center axis of the light emitting diode.

20 29. The sign of claim 26, wherein each light guide provides directional side lighting in a unique direction.

30. A sign comprising:

a frame;

25 a first light emitting diode that emits a radiation pattern wherein a maximum luminous intensity of the radiation pattern is displaced relative to a center axis of the first light emitting diode;

a first light guide fixture, the first light guide fixture formed to mate with light guides, wherein the first light emitting diode and the first light guide fixture are housed in the frame;

a first light guide having a first end mated with the first light guide fixture,  
wherein the first end of the first light guide is positioned at a first offset location relative  
to the center axis of the light emitting diode;

5 a second light guide having a first end mated with the first light guide fixture,  
wherein the first end of the second light guide is positioned at a second offset location  
relative to the center axis of the first light emitting diode;

a second light emitting diode that emits a radiation pattern wherein a maximum  
luminous intensity of the radiation pattern is displaced relative to a center axis of the  
second light emitting diode; and

10 a second light guide fixture, the second light guide fixture formed to mate with  
light guides,

wherein the first light guide has a second end mated with the second light guide  
fixture, wherein the second end of the first light guide is positioned at a first offset  
location relative to the center axis of the second light emitting diode,

15 wherein the second light guide has a second end mated with the second light  
guide fixture, wherein the second end of the second light guide is positioned at a second  
offset location relative to the center axis of the second light emitting diode, and

wherein the frame is formed with holes and wherein the first and second light  
guides pass through the holes.

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31. The sign of claim 30, wherein the first and second light guides are positioned such  
that a cross-sectional center of each light guide substantially corresponds to locations of  
the maximum luminous intensity of the radiation pattern of each of the light emitting  
diodes.

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32. The sign of claim 31, wherein the locations of the maximum luminous intensity of  
the radiation pattern of the light emitting diode are substantially rotationally symmetric  
around the center axis of the light emitting diode.

33. A method comprising:

positioning a number of light guides next to a light emitting diode that emits a radiation pattern wherein a maximum luminous intensity of the radiation pattern is displaced relative to a center axis of the light emitting diode, each light guide being  
5 positioned at offset locations relative to the center axis of the light emitting diode; and  
illuminating the light guides with the light emitting diode.

34. The method of claim 33, further comprising:

positioning each light guide such that a cross-sectional center of each light guide  
10 substantially corresponds to locations of the maximum luminous intensity of the radiation  
pattern of the light emitting diode.

35. A sign comprising:

a frame;  
15 a light emitting diode housed within the frame;  
a first light guide positioned to be illuminated by the light emitting diode, wherein  
the first light guide provides directional side lighting in a first direction; and  
a second light guide positioned to be illuminated by the light emitting diode,  
wherein the second light guide provides directional side lighting in a second direction.

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36. The sign of claim 35, wherein the frame is formed with holes and the each light  
guide protrudes through at least one of the holes.

37. The sign of claim 35, wherein the light emitting diode is a first light emitting  
25 diode, the sign further comprising a second light emitting diode housed within the frame,  
wherein the first and second light guides are positioned to be illuminated by the second  
light emitting diode.

38. The sign of claim 35, wherein the first and second light guides provide lighting in  
30 different colors.